

Amendment and Response to Office Action mailed 12/16/2003
Serial No. 10/042,955

Atty Dkt. No. 113937-002

PROPOSED RESPONSE – FOR DISCUSSION PURPOSES ONLY

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A method for treating a surface of a layered polymeric structure comprising:

- providing a first non-molten sheet of material;
- providing a second non-molten sheet of material;
- positioning the first sheet or the second sheet to overlap at least a portion of the other sheet to define an interference zone;
- directing a first molten polymeric material into the interference zone to adhere the first sheet to the second sheet to form the layered structure; and
- texturing a surface of the first sheet or the second sheet to form a pattern on the surface.

Claim 2 (original): The method of claim 1 wherein the first sheet is a second polymeric material.

Claim 3 (original): The method of claim 2 wherein the second polymeric material is a monolayer structure.

Claim 4 (original): The method of claim 3 wherein the second polymeric material is a multiple layer structure.

Claim 5 (original): The method of claim 2 wherein the second polymeric material is selected from the group consisting of polyolefins, ethylene and vinyl acetate copolymers, ethylene copolymerized with carboxylic acids having from 3 to 20 carbons and ester and anhydride derivatives thereof, ethylene and vinyl alcohol copolymers, polyamides, polyesters, polyvinyl vinyl chloride, PVDC and elastomers.

Claim 6 (original): The method of claim 5 wherein the polyolefins are selected from homopolymers and copolymers.

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Claim 7 (original): The method of claim 6 wherein the copolymers are selected from copolymers of ethylene and α -olefins having from 3 to 20 carbons.

Claim 8 (original): The method of claim 4 wherein the multiple layered structure comprises a first layer of an ethylene and α -olefin copolymer and a second layer of an ethylene and vinyl alcohol copolymer.

Claim 9 (original): The method of claim 2 wherein the second sheet is selected from the group consisting of a third polymeric material, paper, and metal.

Claim 10 (original): The method of claim 9 wherein the third polymeric material is selected from the group consisting of polyolefins, ethylene and vinyl acetate copolymers, ethylene copolymerized with carboxylic acids having from 3 to 20 carbons and ester and anhydride derivatives thereof, ethylene and vinyl alcohol copolymers, polyamides, polyesters, polyvinyl vinyl chloride and elastomers.

Claim 11 (original): The method of claim 10 wherein the third polymeric material is a polyamide.

Claim 12 (original): The method of claim 11 wherein the polyamide is selected from nylon 6,6, nylon 6, and nylon 6,12.

Claim 13 (original): The method of claim 1 wherein the step of directing a first polymeric material comprises the step of extruding a molten polymeric material.

Claim 14 (original): The method of claim 13 wherein the molten polymeric material is a second polyolefin.

Claim 15 (original): The method of claim 14 wherein the second polyolefin is a homopolymer of ethylene.

Claim 16 (original): The method of claim 1 wherein the step of texturing is carried out prior to the step of adhering the first sheet to the second sheet, substantially simultaneously with

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the step of joining the first sheet to the second sheet or essentially immediately after the step of adhering the first sheet to the second sheet.

Claim 17 (original): The method of claim 16 wherein the step of texturing comprises the step of contacting the first sheet or the second sheet with a surface having a pattern.

Claim 18 (original): The method of claim 17 wherein the surface is provided on a roll.

Claim 19 (original): The method of claim 18 wherein the roll is a chill roll.

Claim 20 (original): The method of claim 18 wherein the roll is a backup roll.

Claim 21 (original): The method of claim 17 wherein the pattern is carried on two rolls.

Claim 22 (original): The method of claim 18 wherein the pattern extends outward from the surface of the roll.

Claim 23 (original): The method of claim 18 wherein the pattern extends inward from the surface of the roll.

Claim 24 (original): The method of claim 18 wherein the roll is metal.

Claim 25 (original): The method of claim 18 wherein the roll is rubber, cork, or plastic.

Claim 26 (original): The method of claim 17 wherein the pattern comprises a plurality of spaced objects.

Claim 27 (currently amended): A method for treating a surface of a layered polymeric structure comprising:

providing a first non-molten sheet of a first polymeric material selected from the group consisting of polyolefins, ethylene and vinyl acetate copolymers, ethylene copolymerized with carboxylic acids having from 3 to 20 carbons and ester and anhydride derivatives thereof, ethylene and vinyl alcohol copolymers, polyamides, polyesters, polyvinyl vinyl chloride and elastomers;

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providing a second non-molten sheet;
positioning the first sheet or the second sheet to overlap at least a portion of the other sheet to define an interference zone;
directing a second molten polymeric material into the interference zone to adhere the first sheet to the second sheet to form the layered structure; and
texturing the first sheet to form a pattern on a surface of the first sheet.

Claim 28 (original): The method of claim 27 wherein the second sheet is selected from the group consisting of a third polymeric material, paper, and metal.

Claim 29 (original): The method of claim 28 wherein the second sheet is a third polymeric material selected from the group consisting of polyolefins, ethylene and vinyl acetate copolymers, ethylene copolymerized with carboxylic acids having from 3 to 20 carbons and ester and anhydride derivatives thereof, ethylene and vinyl alcohol copolymers, polyamides, polyesters, polyvinyl vinyl chloride, PVDC and elastomers.

Claim 30 (original): The method of claim 29 wherein the step of texturing is carried out essentially simultaneously with the step of adhering the first sheet to the second sheet.

Claim 31 (original): The method of claim 30 wherein the step of directing a second polymeric material into the interference zone comprises the step of flowing the second polymeric material in a substantially molten state.

Claim 32 (original): The method of claim 31 wherein the step of directing a second polymeric material into the interference zone comprises the step of applying an adhesive material.

Claim 33 (original): The method of claim 30 wherein the step of texturing comprises the step of contacting the first sheet with a surface having a pattern.

Claim 34 (original): The method of claim 33 wherein the surface is provided on a roll.

Claim 35 (original): The method of claim 34 wherein the roll is a chill roll.

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Claim 36 (original): The method of claim 34 wherein the roll is a back-up roll.

Claim 37 (original): The method of claim 33 wherein the surface is carried on two rolls.

Claim 38 (original): The method of claim 34 wherein the pattern extends outward from the surface of the roll.

Claim 39 (original): The method of claim 34 wherein the pattern extends inward from the surface of the roll.

Claim 40 (original): The method of claim 33 wherein the pattern is generally a checkerboard pattern.

Claim 41 (original): The method of claim 33 wherein the pattern is defined by a series of spaced protuberances.

Claim 42 (original): The method of claim 41 wherein the protuberances have a generally circular shape.

Claim 43 (original): The method of claim 41 wherein the protuberances have a polygonal shape.

Claim 44 (original): The method of claim 41 wherein the protuberances have an irregular shape.

Claim 45 (original): The method of claim 41 wherein the protuberances have a generally teardrop shape.

Claim 46 (original): The method of claim 41 wherein the protuberances have a first set of protuberances with a first shape and a second set of protuberances with a second shape different from the first shape.

Claim 47 (original): The method of claim 41 wherein the protuberances are generally S-shaped.

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Claim 48 (original): The method of claim 30 wherein the first sheet is a monolayer structure or a multiple layered structure.

Claim 49 (original): The method of claim 30 wherein the first sheet is a monolayer structure.

Claim 50 (original): The method of claim 30 wherein the first sheet is a multiple layered structure.

Claim 51 (original): The method of claim 50 wherein the multiple layered structure has a first layer and a second layer.

Claim 52 (original): The method of claim 51 wherein the first layer is a polyolefin.

Claim 53 (original): The method of claim 52 wherein the second layer is a barrier material.

Claim 54 (original): The method of claim 53 wherein the barrier material comprises ethylene vinyl alcohol copolymer or PVDC.

Claim 55 (original): The method of claim 51 wherein the first layer is an ethylene and α -olefin copolymer and the second layer is ethylene and vinyl alcohol copolymer.

Claim 56 (original): The method of claim 48 wherein the second sheet is a monolayer structure or a multiple layered structure.

Claim 57 (original): The method of claim 56 wherein the second sheet contains a layer of a polyamide or a layer of a polyester.

Claim 58 (original): The method of claim 57 wherein the second polymeric material is a polyolefin.

Claim 59 (original): The method of claim 58 wherein the second polymeric material is a homopolymer of ethylene or a copolymer of ethylene and α -olefin having from 3 to 20 carbons.

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Claim 60 (original): The method of claim 59 wherein the second polymeric material is a homopolymer of polyethylene.